



Gwasanaeth Tân ac Achub
De Cymru
South Wales
Fire and Rescue Service

South Wales Fire and Rescue Service

Carbon Reduction Roadmap 2024 - 2030



COURAGE TO ACT,
COMPASSION TO CARE

Introduction

South Wales Fire and Rescue Service treats its commitment to carbon reduction with the seriousness it deserves. Whereas our highest priority will always be the safety of the public, we must also consider potential damage to the environment caused by incidents we respond to, how we respond to them, and the sum of our operational and corporate activities. A key part of our overarching environmental impact is our carbon footprint. Carbon reduction is a defining challenge for organisations across Wales and the world, living in times of global climate and nature crises, but with a unique relevance to us as a Fire and Rescue Service, in the nature of the services we provide to our communities, and how a changing climate will directly impact public safety and the nature and frequency of incidents.



A changing climate will bring new challenges; that will have the greatest impact on the most vulnerable in our communities, reducing food and water availability, increasing living and insurance costs, and high temperatures resulting in negative health impacts experienced disproportionately. We will be responding to incidents such as wildfires, storms and floods at increasing frequency, and new and emergent technologies designed to address **climate change** will also pose new fire risks such as lithium-ion batteries, wider uptake of electric vehicles, and changes to the insulation of buildings. The more we can give towards reduction, the more we work towards efficiencies in the future, whereas inaction leads to increasing the load of what will already be challenging and stretching times ahead for the sector and for South Wales.

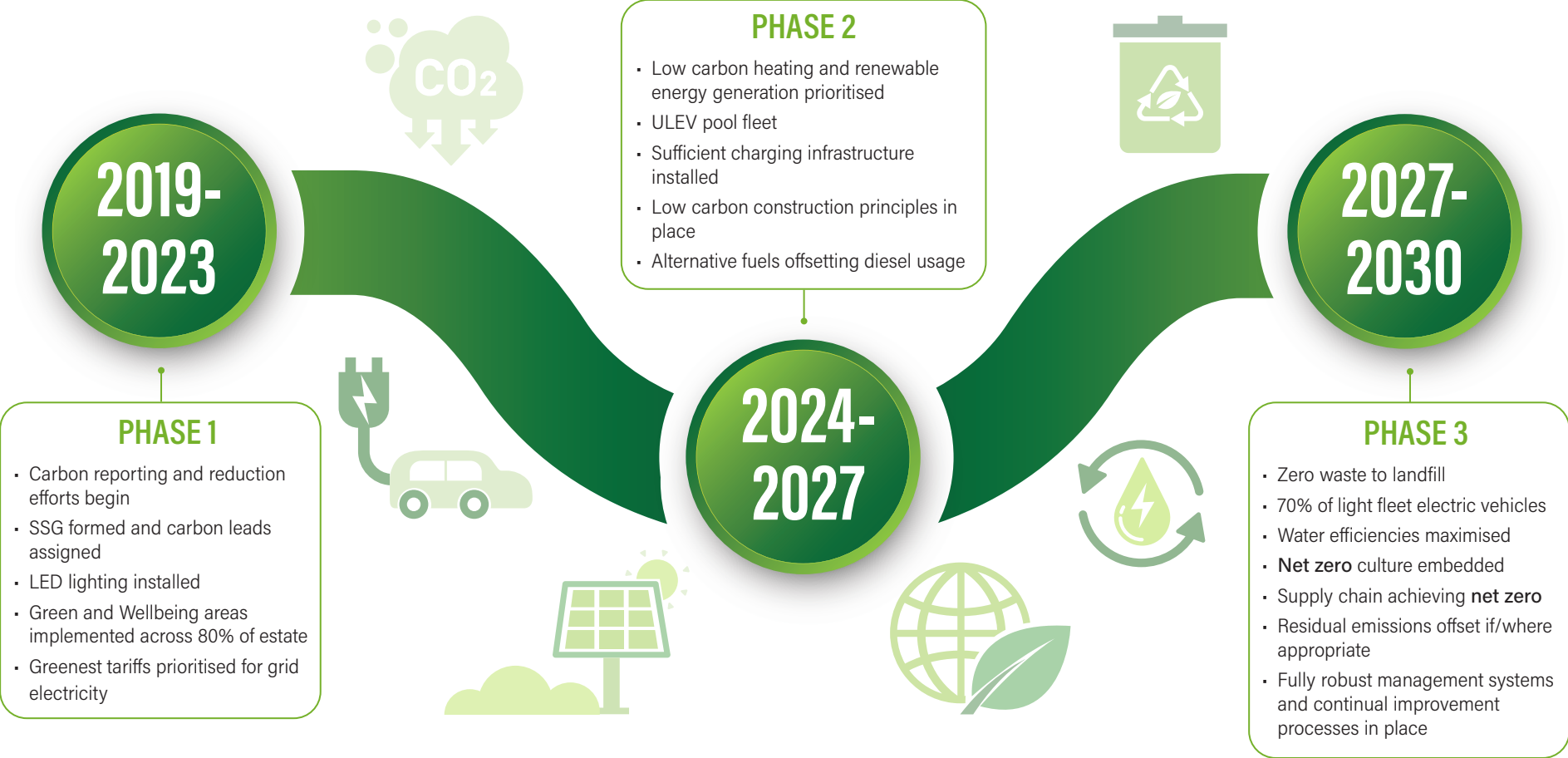
Part of our core work is preventing or controlling fires, this can reduce the carbon that would be emitted from avoided fires through community safety or arson prevention work, or in controlling the intensity of active fires, where the more material that can be saved from combustion, the less carbon that will be emitted. Fire is a significant driver of the global carbon cycle, as the burning of organic matter releases stored carbon into the atmosphere as carbon dioxide. This has extra carbon significance in the case of forest fires as damage to trees and vegetation reduces sequestration capacity (the ability of trees and plants to capture and store carbon dioxide from the atmosphere via photosynthesis).

We want to exercise pragmatism to adapt to risk and be prepared for challenges on the horizon, but we also want to empty the tank on mitigation efforts by striving to minimise our impact, maximise opportunities for innovation, and operate from a place of hope and action.

In 2030, we want to be a Fire Service that continues to put the safety of the public above all else but that both fully recognises its environmental impact and its role in environmental stewardship. We understand that we rely on natural resources for the services that we provide, and for the communities - and the people and wildlife that call them home - to thrive. A Fire Service that is mindful in its response to incidents, diligent in its corporate activities, and has fostered a strong culture of environmental stewardship, carbon reduction and resource efficiency where every member of staff is invested in what that means within their role, and within their control. Fire service staff have an educational role within the community around changing definitions of safety and the climate adaptation methods that this will entail. Fire stations and corporate buildings will be maximising their potential by generating their own renewable energy, both internal meetings and public engagement events can be held in well maintained green spaces that staff and communities are invested in, improving energy, focus and wellbeing. Business journeys that can't be made wheeling, walking, biking, or on public transport are made using electric pool cars or vans that the whole workforce is confident in using and do so in an efficient and considerate manner. Diesel usage is supplemented with biofuels until more renewable alternatives are technologically ready and affordable, but whatever the fuel, the red fire appliance remains a symbol of safety within our communities, and one that evolves with the times but is ever-present in responding to your emergency. We are engaged with our supply chains, and it is the norm to engage with suppliers big and small on their own carbon reduction and how we can reduce the impact of our goods and services through them. We are always looking for new and stretching ways in which we can lessen our impact and shrink our carbon footprint, even though the nature of our activities means that we can't wipe it from the sand completely.

Roadmap to 2030

In October 2021, Welsh Government set out its second carbon budget, “**Net Zero Wales**” confirming the ambition of achieving a collective carbon neutral public sector by 2030. SWFRS have operated in the spirit of the challenge including the production of Carbon Reduction plans and the 2030 Road Map, guiding the years that lead us to our target date, but also recognise the scale of the challenge. We must consider budgetary, technological, and human resource restraints. The roadmap is broken into overarching carbon reduction milestones along the ‘road’ grouped into ‘phases’ which cover specific time spans. The tasks that will lead to or support the milestones are included in the appendix action plans.



What we did during Phase 1



During phase 1 we:

- returned annual emissions reports to Welsh Government for four consecutive years alongside internal carbon accounting
- established green spaces and wellbeing areas across 80% of the estate
- installed LED lighting across the estate with any remaining sites converted during scheduled refurbishment
- signed up to relevant service area Healthy Travel Charters
- installed energy saving drying room technologies
- set up an internal furniture depository system for corporate recycling of furniture in attempts to minimise unnecessary purchases of new furniture and usable products being disposed of prematurely
- reviewed procedures and guidance for Sustainable Procurement and tenders
- use of Sustainability Procurement tool which was developed with WRAP Cymru to assess necessity and environmental impact of contracts
- incorporated sustainability questions into tenders to assess environmental and carbon credentials of bidders

Progress in Phase 2

2024-
2027

The progress we have made in phase 2:

- Installed solar panels for renewable generation at suitable sites
- Decarbonised heat at 6 sites
- Segregated corporate waste for recycling ahead of mandatory implementation in line with Workplace Recycling Regulations
- Implemented ULEV pool fleet
- Installed EV charging infrastructure at 98% of sites
- Installed rapid charging facilities at 9 sites
- Introduced staff charging policy and facilities



Next steps on the road

Further progress into phase 2 and preparation work for phase 3 will be recorded and monitored via the appendix category action plans, which will have an assigned carbon lead and a SWFRS employee/employees assigned to each task for implementation and monitored quarterly via the internal Sustainability Steering Group.

Huge financial and people resources will be required to make sure that the phases are adhered to, and the reductions are driven down as far as possible before it becomes time to offset residual emissions in 2030. To imply that significant reductions are possible without financial and cultural investment would be to prepare for failure. The cost of decarbonisation is high, but the cost of inaction threatens to be higher than we can predict.

We want to work efficiently as internal teams and in collaboration with other public services and partners to work towards the 2030 vision of the introduction. The outcomes of inaction will include our communities at increased risk, stretching of our resources and services and more and more being asked of our employees fighting fire on a warming planet.

Review and Monitoring

The 2030 Road Map (carbon reduction plan) is for the period 2024 – 2030, to follow on from the previous Carbon Reduction Plan 2020-2023 and to correspond with the Welsh Government ambition of a carbon neutral public sector in this time frame. Ownership of the Road Map will sit with the members of the internal South Wales Fire and Rescue Service Sustainability Steering Group. A review of progress on the roadmap phases and action plans outlined will take place quarterly. Wider environmental and sustainability work, alongside carbon reduction, will be reported in an Annual Environmental Review which will be published internally to internal department of Risk, Performance and Statistics, SLT/ Board and externally on a dedicated Sustainability and Environment page on our public facing website as it develops. Annual returns will be presented to Welsh Government **Net Zero** team in the dedicated format, and any future internal calculations kept with clear and accessible process notes, and a consistent methodology.

Offsetting Residual Emissions

It is important to note that the amount of residual emissions at the 2030 point will depend on the investment in carbon reduction in the years that remain. It is also important to note that the public sector will be responsible for offsetting its emissions as a collective and there may be calls to adhere to a particular type of offsetting as the 2030 picture becomes clearer. Offsetting is a last resort scenario, where an accurate and meaningful 'balance' is hard to achieve even with investment into the greenest and most grass roots of offsetting schemes. South Wales Fire and Rescue service recognises the place of offsetting within carbon neutrality but questions its validity in achieving a true balance and does not consider it to be a safety net nor an excuse to take the foot off the pedal on carbon reduction efforts in their purest form.

Appendix 1 - Category Action Plans

Estate and Energy

Action	Timescale/Phase <i>(published externally)</i>
Complete energy audits across all sites to identify high consuming equipment and opportunities for reduction.	Phase 2
Complete meter upgrade programme of works to ensure that all meters are giving accurate and meaningful readings and data.	Phase 2
All buildings assessed to have standardised, effective building management systems including a dedicated central resource to optimise energy use across the built estate on a consistent basis.	Phase 2
Maximise funding opportunities for low carbon heat and renewable energy installation.	Phases 2 and 3
Complete surveys to understand the overall viable potential for onsite renewable energy generation across the estate.	Phase 2
Modern Methods of Construction (MMC) for design of new buildings to minimise construction related carbon emissions and maximise operational efficiency of buildings.	Phases 2 and 3

Appendix 1 - Category Action Plans

Waste

Action	Timescale/Phase <i>(published externally)</i>
Develop Waste Training resources internally in response to common recycling issues and myths.	Phase 2
Work with contractors to collect meaningful and presentable waste data to minimise refuse truck mileage, deliver regular updates to sites on their waste production and work with them in a bespoke manner on reduction.	Phase 2
All waste streams will be reviewed on an annual basis to ensure the most sustainable method of disposal is being undertaken; the waste hierarchy will be used as a template for action and transfer documentation assessed.	Implemented in Phase 2
Reduce the amount of general waste produced by the service as far as possible.	Phases 2 and 3
Monitor usage of single use plastic bottles and look to implement alternatives where possible in line with Zero waste ambitions.	Phases 2 and 3
Assess paper usage and digitalise internal forms and other processes as far as possible.	Phases 2 and 3
Improve data collection internally across all identified waste streams.	Phase 2
Develop relationships and processes with local repair and reuse organisations to ensure that unwanted items are given a new life wherever possible.	Phases 1 - 3 as new projects etc. arise

Appendix 1 - Category Action Plans

Fleet and Travel

Action	Timescale/Phase <i>(published externally)</i>
Sustainable transportation and active travel a design element for new sites in line with Welsh Governments Active Travel guidance and action plan.	Phase 2
Improve data management and reporting for business mileage, fuel consumption and commuting.	Phase 2
Light fleet 70% ULEV by 2030.	Phases 2 and 3
Fossil fuelled fleet to utilise alternative low carbon fuels such as HVO as an interim carbon reduction measure.	Phase 2
Survey, research and engage on commuting, home-working and pool vehicle usage.	Phase 2
Promote car sharing, public transport discounts and increase usage of electric pool vehicles.	Phase 2
Regularly assess charging infrastructure across the estate to ensure that it is reflective of changing vehicle profiles and to maximise funding opportunities.	Phases 2 and 3
Monitor Emergency Service ULEV technology to be ahead of trends and plan for the future.	Phases 2 and 3

Appendix 1 - Category Action Plans

Procurement Processes and Supply Chain

Action	Timescale/Phase <i>(published externally)</i>
Launch internal awareness campaigns in relation to packaging, recyclable materials, environmental accreditations of products and alternatives to plastic	Phase 2
Prioritise working with repeat contractors and large contracts where applicable on carbon reduction of their products and services	Phases 2 and 3
Improve understanding and reporting of Supply Chain emissions to build clearer picture on environmental impact of supply chain with dedicated annual review	Phases 2 and 3
Develop a framework for assessing the sustainability credentials of suppliers at varying contract values and types	Phases 2 and 3
Work with ICT and other relevant departments on the suitability of using refurbished devices and accessories	Phases 2 and 3

Appendix 1 - Category Action Plans

Training, Engagement and Behaviour Change

Action	Timescale/Phase <i>(published externally)</i>
Carbon and environmental responsibilities of each role to be included in job descriptions and evaluations such as Personal Review.	Phase 3
Launch and roll out a dedicated environmental package including sector specific/ NFCC approved Carbon Literacy Training to support carbon reduction.	Phase 3
Formalise means by which we evaluate and reduce carbon emissions in operational duties and training.	Phase 2
Build an internal network of 'Sustainability Champions' or equivalent to be ambassadors for environmental work including carbon reduction across departments.	Phase 3

Appendix 1 - Category Action Plans

Water

Action	Timescale/Phase <i>(published externally)</i>
Establish monitoring and reduction systems for corporate water usage.	Phase 3
Research the water efficiency of current appliances and accessories and how the most efficient products can be chosen.	Phase 3
Explore the feasibility of rainwater harvesting and other water recycling across sites.	Phase 2
Water usage and savings tips to be communicated internally and incorporated as part of Environmental Training Package.	Phases 2 and 3
Work with partners to assess the feasibility of using treated wastewater for firefighting activities.	Phase 3